

WHAT IS CLAIMED IS:

1. A method comprising:

transmitting a variable length AAL CPS packet over a non-ATM-specific bus;

receiving a first part of the variable length AAL CPS packet;

determining a length of the variable length AAL CPS packet;

determining synchronization information based on the length of the variable length AAL CPS packet;

continuing to receive the variable length AAL CPS packet; and

using the synchronization information to determine that reception of the variable length AAL CPS packet is complete.

2. The method of claim 1 in which the variable length AAL CPS packet comprises an AAL2 CPS packet and the non-ATM-specific bus comprises a PCI bus.

3. The method of claim 1 in which transmitting the variable length AAL CPS packet over a non-ATM-specific bus further comprises transmitting the variable length AAL CPS

4. The method of claim 1 in which receiving a first part of the variable length AAL CPS packet comprises receiving header information of the variable length AAL CPS packet and in which determining a length of the variable length AAL CPS packet comprises reading a value indicative of the length of the variable length AAL CPS packet from the header information of the variable length AAL CPS packet.

6. The method of claim 5 in which determining whether to save or discard the variable length AAL CPS packet comprises determining whether there is currently sufficient buffer space to save the complete AAL CPS packet.

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buffer space to save a received but unsaved portion of the AAL CPS packet.

8. The method of claim 1 further comprising determining whether resynchronization should occur and performing a soft-resynchronization if it is determined that resynchronization should occur.

9. The method of claim 8 in which determining whether resynchronization should occur includes receiving an indication that synchronization has been lost.

10. The method of claim 9 in which determining whether resynchronization should occur includes receiving an indication that a predetermined interval has passed since a prior resynchronization.

11. The method of claim 8 in which performing a soft-resynchronization comprises:

generating a number of null AAL CPS packets;
transmitting the null AAL CPS packets;
receiving the null AAL CPS packets; and
resynchronizing based on the received null AAL CPS packets.

12. The method of claim 11 in which a length of a maximally long AAL CPS packet is indicative of a number of octets comprising the maximally long AAL CPS packet, and in which an aggregated length of the null AAL CPS packets is at least equal to the length of the maximally long AAL CPS packet.

13. The method of claim 12 further comprising:

generating a second AAL2 CPS packet;

transmitting the second AAL2 CPS packet; and

receiving the second AAL2 CPS packet;

in which resynchronizing because of the received null AAL CPS packets includes entering a search mode because of the received null AAL CPS packets and searching received packets octet-by-octet for a first non-zero octet while in the search mode.

14. The method of claim 11 in which a length of a maximally long AAL CPS packet is indicative of a number of read-write cycles used to transmit the maximally long AAL CPS packet, and in which an aggregated length of the null AAL CPS packets is at least equal to the length of the maximally long AAL CPS packet.

15. The method of claim 14 in which resynchronizing because of the received null AAL CPS packets includes determining synchronization information from a received null AAL CPS packet.

16. The method of claim 8 in which performing a soft-resynchronization comprises:

generating a resynchronization instruction;

transmitting the resynchronization instruction over the non-ATM-specific bus;

receiving the resynchronization instruction; and

resynchronizing based on the resynchronization instruction.

17. A system comprising:

a transmitting circuit that transmits a variable length AAL CPS packet over a non-ATM-specific bus;

a first receiving circuit that receives a first part of the variable length AAL CPS packet;

a length determining circuit that determines a length of the variable length AAL CPS packet;

a sync determination circuit that determines synchronization information based on the length of the variable length AAL CPS packet;

a second receiving circuit that continues to receive the variable length AAL CPS packet; and

a synchronization circuit that uses the synchronization information to determine that reception of the variable length AAL CPS packet is complete.

18. The system of claim 17 in which the first receiving circuit comprises a header reception circuit that receives header information of the variable length AAL CPS packet and in which the length determining circuit comprises a reading circuit that reads a value indicative of the length of the variable length AAL CPS packet from the header information of the variable length AAL CPS packet.

19. The system of claim 17 further comprising a discard circuit that determines whether to save or discard the variable length AAL CPS packet, and in which the discard circuit includes a buffer query circuit that determines whether there is currently sufficient buffer space to save a received but unsaved portion of the AAL CPS packet.

20. The system of claim 17 further comprising a sync control circuit that determines whether resynchronization should occur and that includes a resynchronization circuit that performs a soft-resynchronization if it is determined that resynchronization should occur.

21. The system of claim 20 in which the soft-resynchronization circuit comprises:

a null generation circuit that generates a number of null AAL CPS packets;

a null transmission circuit that transmits the null AAL CPS packets;

a null reception circuit that receives the null AAL CPS packets; and

a null resynchronization circuit that resynchronizes because of the received null AAL CPS packets.

22. The system of claim 21 in which a length of a maximally long AAL CPS packet is indicative of a number of octets comprising the maximally long AAL CPS packet, and in which an aggregated length of the null AAL CPS packets is at least equal to the length of the maximally long AAL CPS packet.

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23. The system of claim 22 further comprising:

a packet generator circuit that generates a second AAL2 CPS packet;

a packet transmission circuit that transmits the second AAL2 CPS packet; and

a packet reception circuit that receives the second AAL2 CPS packet;

in which the null resynchronization circuit includes a searching circuit that enters a search mode because of the received null AAL CPS packets and searches received packets octet-by-octet for a first non-zero octet while in the search mode.

24. A computer program stored on a computer readable medium or a propagated signal, the computer program comprising:

a transmitting code segment that causes the computer to transmit a variable length AAL CPS packet over a non-ATM-specific bus;

a first receiving code segment that causes the computer to receive a first part of the variable length AAL CPS packet;

a length code segment that causes the computer to determine a length of the variable length AAL CPS packet;

a sync determination code segment that causes the computer to determine synchronization information based on the length of the variable length AAL CPS packet;

a second receiving code segment that causes the computer to continue to receive the variable length AAL CPS packet; and

a synchronization code segment that causes the computer to use the synchronization information to determine that reception of the variable length AAL CPS packet is complete.

25. The computer program of claim 24 in which the first receiving code segment comprises a header reception code segment that causes the computer to receive header information of the variable length AAL CPS packet and in which the length code segment comprises a reading code segment that causes the computer to read a value indicative of the length of the variable length AAL CPS packet from the header information of the variable length AAL CPS packet.

26. The computer program of claim 24 further comprising a discard code segment that causes the computer to determine whether to save or discard the variable length AAL CPS packet, and in which the discard code segment includes a

buffer query code segment that causes the computer to determine whether there is currently sufficient buffer space to save a received but unsaved portion of the AAL CPS packet.

27. The computer program of claim 24 further comprising a sync control code segment that causes the computer to determine whether resynchronization should occur, and that includes a resynchronization code segment that causes the computer to perform a soft-resynchronization if it is determined that resynchronization should occur.

28. The computer program of claim 27 in which the soft-resynchronization code segment comprises:

a null generation code segment that causes the computer to generate a number of null AAL CPS packets;

a null transmission code segment that causes the computer to transmit the null AAL CPS packets;

a null reception code segment that causes the computer to receive the null AAL CPS packets; and

a null resynchronization code segment that causes the computer to resynchronize because of the received null AAL CPS packets.

29. The computer program of claim 28 in which a length of a maximally long AAL CPS packet is indicative of a number of octets comprising the maximally long AAL CPS packet, and in which an aggregated length of the null AAL CPS packets is at least equal to the length of the maximally long AAL CPS packet.

30. The computer program of claim 29 further comprising:

a packet generator code segment that causes the computer to generate a second AAL2 CPS packet;

a packet transmission code segment that causes the computer to transmit the second AAL2 CPS packet; and

a packet reception code segment that causes the computer to receive the second AAL2 CPS packet;

in which the null resynchronization code segment includes a searching code segment that causes the computer to enter a search mode because of the received null AAL CPS packets and while in the search mode to search received packets octet-by-octet for a first non-zero octet.